## Introduction of Literature Review

It is now time to do research on various case studies of digital piracy and suitable technologies that may be used to protect intellectual property after performing a review of the literature. The methodology for both the research and development processes, the tools that are being used in the process of development, and how it has been developed from the choice of technology to testing the final product are all being examined right now. It includes both primary and secondary research in which there are existing cases of this piracy. Most of this material discusses the current technology that various businesses utilize to safeguard their intellectual property. However, the primary focus of this research is on intellectual property theft. This review will therefore be conducted while using the research process of other sources**.**

## Secondary Research

### Case-1 Digital Piracy

Managing copyright issues is the most frequent challenge of the twenty-first century. The internet is a vast ocean for all the uncountable pirates that steal all the digital content, which causes the author financial harm. Piracy-related behaviors existed undoubtedly before the information society was developed. However, this situation has grown much more apparent because of virtually unfettered access to file repositories and illegal VOD (Video on Demand) services, particularly within the creative industry, which has experienced enormous losses because of piracy. The phenomena are thought to be worldwide, with human features being the same everywhere. It is widespread and exclusively connected to the digital revolution, widespread computerization, and social activities. In this book, the terms "digital piracy" and "piracy" refer to the unlawful act of stealing or copying content from any source using any method and converting it to digital form. The most common method is file sharing, which includes downloading from websites that offer free copies of pirated content, like Megaupload; using a peer-to-peer (P2P) network to easily facilitate file sharing activity via the internet illegally, like Torrent; or just copying files using flash drives.

Digital piracy is typically seen as an act of theft, which qualifies it as a crime and makes it punishable by serious penalties. However, some contend that because digital piracy accidentally reduces the cost of promotion, it may be advantageous for business. The expanding unlawful online activities, according to the entertainment and other digital-related industries (such as labels, production houses, and software companies), have had a significant negative impact. Because the practice reduces the anticipated industry earnings, the government may also suffer because of piracy. Additionally, the "piracy industry" encompasses restricted or outright forbidden information, such as porn, which undermines some governments' initial efforts to outlaw it.

According to a study on the analysis of box office movie revenue before and after Megaupload—one of the largest pirate websites—was shut down, heterogeneous products are affected differently by the availability of pirated substitutes. Big movies with significant promotions saw an increase in revenue after the shutdown, whereas "small" films saw the opposite. 9. These results suggest that not all businesses are affected negatively by piracy. For new items, it can take the place of the budget for marketing.

According to a United States (US)-based study on the effects of music piracy in 2007,

* The US economy loses $12.5 billion in total output yearly as a result of both domestic and international music piracy. The output consists of earnings and other indicators of economic performance.
* The U.S. economy loses 71,060 jobs because of sound recording piracy. Out of this sum, 26,860 jobs would have been added to the retail sector or the recording business, and 44,200 jobs would have been added to other American industries.
* Employees in the United States lose $2.7 billion in wages each year as a result of sound recording piracy. Workers in the music business or in retailing downstream would have made $1.1 billion of this amount, while employees in other U.S. industries would have made $1.6 billion.
* Federal, state, and municipal governments in the United States lose at least $422 million in tax revenue each year as a result of piracy. Of this sum, $131 million is lost in business and production taxes, while $291 million is wasted in personal income taxes.

The biggest benefit of consuming pirated content over lawfully obtained content is the "convenience" it offers. Illegal downloads have more user-friendly file formats that let users easily manage and customize the files. Users also have a lot of options and a simple way to spread the joy of "eating" the goods. Piracy is also extremely cheap or even free, even though it carries some technological risks like malware and viruses. These are faceting those conventional sales do not cover.

### Case-2 The Use of QR Code Technology in Different Sector

QR Codes can now be used in a variety of ways, such as displaying the website URL (URL stands for Uniform Resource Locator), which is the address of various information on the internet, such as the address of files or websites, messages, phone numbers, and other text information. Due to its versatile nature, it is already used and can be used in various fields and forms. The next generation is embracing QR codes more and more as they provide far simpler authentication than the conventional user ID and password. Numerous benefits are provided by QR codes, including increased data storage capacity, quick readability, 360-degree reading, tiny print size, error correction, support for more languages, and resistance to scuffs and other damage. These codes are frequently used by businesses that are relatively new to the internet marketplace in place of the standard login procedure. A secure QR code technique based on visual cryptography was presented by Xiaohe Cao to address the security and information issues with QR codes. Due to the widespread use of QR Codes, there are serious security issues with them, including data loss and data tampering. The QR code is divided into two shareable images that will be sent separately. The pseudo-random matrix served as the foundation for the creation of the two shared images; hence, the pixels in the two shared images are decided by the values of the pseudo-random matrix. Only by stacking the two shared photos can the information be revived. The simulation's results show how effectively and efficiently the QR code's image may be reconditioned. Peter Kieseberg has investigated how QR Codes might be used to challenge both automated systems and human contact. One cannot tell a good QR code from a bad corrupted one because the encoded data is only intended to be machine readable. While humans may be vulnerable to phishing attacks, robot readers are significantly more vulnerable to SQL and command injections. The work from Peter Kieseberg is an overview of the QR code as an attack vector, presenting various attack strategies for the attackers to read and consider the ramifications of.

QR code in Application (Fonepay)

Fonepay is a digital payment processor that facilitates mobile/digital payments by connecting consumers, banks, and merchants in an interoperable network. It is Nepal's first mobile payment network to be licensed as a Payment Service Operator by the central bank (PSO). It has used QR code to scan the customers bank details and pay direct not their respective bank account. Its features help to make the user very efficient and easy to use and its fast as well. Both the sender and receiver will be benefited as its service is so smooth. Likewise, the use of qr code was done by Fonepay to make the user experience better, in this project as well the use of 2D barcode can be used in such a way that the experience for the user to protect their original product safely.

### QR code in education

It could be stated that studies on use of QR Codes in education were generally conducted in the field of mobile learning. Review of the related literature revealed that mobile devices were used while using QR Codes. According to So, the most important aspect of mobile learning is the trilogy of ‘location independence’, ‘time independence’ and ‘meaningful content’. These three basic features are among characteristics of mobile learning, and they differ from e-learning and web-based learning due to these features. In another study carried out by McCabe and Tedesco QR codes were used via smart phones for direct connection with the subjects within the scope of the course of mathematics. In the study conducted with 14 learners, all the learners reported positive views about the QR codes prepared for the course of mathematics.

QR codes in enterprises

Due to the ability to "see" all traffic (QR code scans) going through the redirect URL, dynamic QR codes are more common in enterprise use cases. The ability to change the destination URL as needed and on demand is another important Dynamic QR code feature for businesses. This feature gives you more control over how you manage and update a QR code after it's been printed. You're stuck with the destination URL used with static QR codes unless you make advanced DNS changes later to redirect users. Static QR codes, on the other hand, can be problematic, which is why dynamic QR codes are preferred. One of the American weather channels started a QR code campaign to boost their app downloads. A British free- to-air television network used on screen QR codes to provide an active television session to viewers. 2D barcode is used on WhatsApp to share your profile and open your message on computer by scanning qr code in phone. many brands use the code to promote their presence on social media and it also helps customer to easily redirecting to e page they are looking for. [(Scanova, 2019)](#scanova)

### Case- 3 Online Textbook Piracy

Academic textbook theft is neither simpler nor more difficult than the theft of the majority of other types of digital property. The problem of electronic academic text theft has received less attention than broader digital piracy in the literature. Consequently, the following literature review, which compiles all previous writing on this subject, Although the academic journal press is also taking note, much pertinent literature is only available as blog postings and pieces from the popular press because it is a rather "up to the minute" topic. We have put together this review, at least in part, to harmonies these viewpoints.

Technical facts, recent lawsuit news, anti-piracy measures, and evaluations of the moral and sociopsychological implications of digital piracy among students are all covered.

**Conclusion (Lekhdaii xuu)**This is when we discover that piracy has several facets. Instead of getting stuck in the conventional paradigm that only blindly demonises piracy, industries and policy makers should appropriately respond to the findings about the multi-effects of piracy in order to form the best strategy to generate the most profits from previously digitally pirated products and benefit more people. Who knows, maybe in the future, piracy will be the next official marketing tactic.

**Primary Research**

Development Methodology(Agile)

Tools

Technology

Techniques

Research Methodology (

Conclusion from the Literature Review

### SLR METHODOLOGY

The goal of the Systematic Literature Review (SLR) is to learn about and analyses the most recent advances in QR code detection and pre-processing. It should be noted that there are very few literature reviews on this subject, making future research and development in this field difficult. As a result, the current systematic literature review is even more important. After reading this review, it should be clear to the reader that no algorithm is the absolute best choice for any task, and that it is entirely dependent on the intended application.

Likewise, the company that is mentioned above qr code can be used in various form. Here in this project as well methods that can be used to generate and operate the qr code will be done. Generating the product key or QR code, and if you share it, it will automatically generate a new form of QR code so that each one is unique. This method is more secure, and it also helps to protect your property from digital piracy, and you will receive your true value and respect for your creation or product.

## FUTURE SCOPE

QR codes are becoming one of the most prime facets in cashless transactions. They were already hugely popular and in use in the European countries as well as in America but in past few years, they are gaining momentum in South and East Asia. In China, the implementation of QR code has even surpassed cash and card-based transactions. This must be one of the biggest achievements so far for these QR codes. In India, there is a rapid hike in the usage of QR codes and the new era of cashless India is ushering upon the country’s horizon.Many people argue with the fact that QR codes are used as a second fiddle while doing money related transactions. These codes are slowly becoming first preference for many users in the recent times. The main limitation of QR codes is that they are only being used to redirect to a webpage or website, but they are not collecting any information on their own. If in this hugely data driven world, if these codes start to collect information and start a two-way transaction then it will surely stabilize in this technology market for future years.Another limitation regarding the application of QR codes is that one must have a QR code reader or scanner installed in their mobile or tablet to be able to scan and read the data held by the QR code. Instead of this, we can create and integrate the QR code scanners in our smartphone’s camera itself so that we don’t need any other third-party application to scan the QR codes. QR codes have been scrutinized by many of the technology and security pundits but still it has been loved and accepted by the normal people at a high context. They have been literally used everywhere as far as promotional events are concerned like mobile payments, coupons, air ticket coupons, business cards, new business profile promotions etc. There are new technologies launching in the last couple of years who are better or more secure than QR codes, but still QR codes will be there for many more years to come because of the ease of their use and many people in the developing countries already adapting them in the recent past. So, it is a rare possibility that they will again turn to a new technology after taking so many years to get used to the QR codes.